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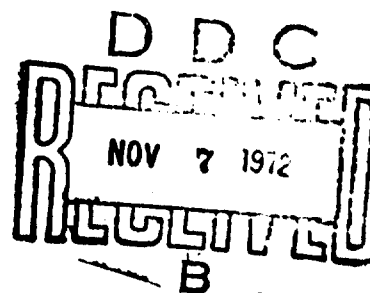
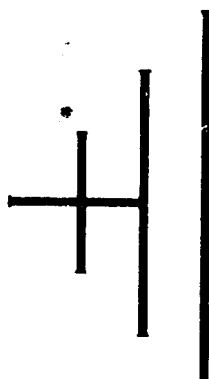
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AN ANALYSIS OF "ASSURED DESTRUCTION"

By

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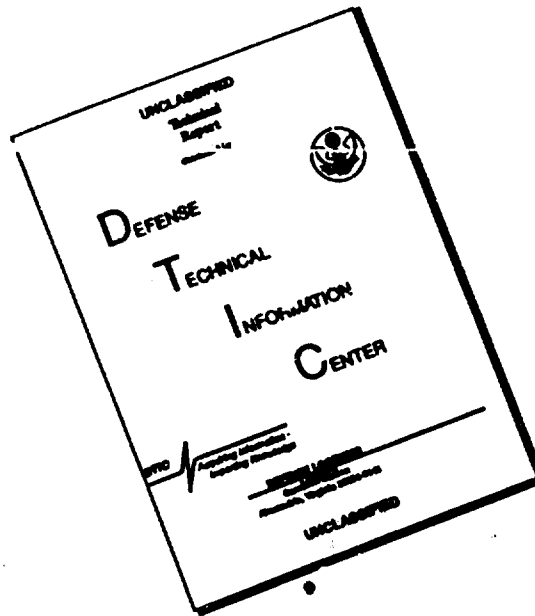
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ABSTRACT

The belief that the United States must retain an "assured destruction" capability, to be able to destroy some fixed percentage of Soviet citizenry and industrial capacity, even after absorbing a Soviet nuclear first strike, is the cornerstone of American strategic policy, both at present and in the mid-to-late 1960's. Arguments for and against the desirability of basing U.S. strategic policy upon retention of an assured destruction capability are given. A large number of quotations are given from proponents and opponents.

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AN ANALYSIS OF "ASSURED DESTRUCTION"

The strategic philosophy which has molded United States strategic policy since the mid-1960's emphasizes the need for the United States to possess an "assured destruction" (AD) capability vis-a-vis its superpower competitor, the Soviet Union. Perhaps the clearest exposition of this posture was given by then Secretary of Defense Robert McNamara in his "posture statement" of January 1968: "We can all agree that the cornerstone of our strategic policy must continue to be the deterrence of a deliberate nuclear attack against either the United States or its allies...I am convinced that our forces must be sufficiently large to possess an 'Assured Destruction' capability. By this I mean an ability to inflict at all times and under all foreseeable conditions an unacceptable degree of damage upon any single aggressor or combination of aggressors--even after absorbing a surprise attack...the fundamental principle involved is simply this: it is the clear and present ability to destroy the attacker as a viable 20th century nation and an unwavering will to use these forces in retaliation to a nuclear attack upon ourselves or our allies that provides the deterrent [against such an attack.]...As long as deterrence of a deliberate...nuclear attack upon the United States or its allies is the vital first objective of our strategic forces, the capability for 'Assured Destruction' must receive the first call on our resources... In the case of the Soviet Union I would judge that a capability on our part to destroy, say, one-fifth to one-fourth of her population would serve as an effective deterrent".

One great appeal of AD is that it supports a very strongly felt and widely held belief, that our military expenditures since 1945 have been basically wasted

on an arms race that has made the United States less, not more, secure. "...ever since World War II the military power of the United States has been steadily increasing, while at the same time our national security has been rapidly and inexorably decreasing." (H. York, Race to Oblivion, Simon and Schuster).

AD supports this attitude by assuming, in effect, that once each side has some given number of nuclear weapons, the only political value of nuclear weapons is to deter a nuclear attack. "The new weapons systems which are being developed by each of the two great powers will provide neither protection nor opportunity in any serious political sense. Politically the strategic arms race is in a stalemate. It has been this way since the first deliverable hydrogen weapons were exploded, and it will be this way for as far ahead as we can see, even if future developments should be much more heavily one-sided than anything now in prospect."

(McGeorge Bundy, "To Cap the Volcano", Foreign Affairs, October 1969.)

AD, moreover, confirms all the arguments regarding "overkill"--once the United States has an AD capability, any money spent to improve the nuclear forces beyond this point would be wasted. "Our numerical superiority over the Soviet Union in reliable, accurate and effective warheads is both greater than we had originally planned for and more than we require...[W]e had to insure [against a massive Soviet build-up]...by undertaking a major build-up of our own Minuteman and Polaris forces. ...[I]f we had more accurate information about planned Soviet strategic forces we simply would not have needed to build up as large a strategic arsenal as we have today." (R. McNamara, The Essence of Security, Harper and Row.)

AD is perhaps most welcomed because it offers an acceptable alternative to the increasingly more expensive strategic competition between the nuclear superpowers. If each superpower attains an AD capability vis-a-vis the other, then a state of mutual deterrence exists and, for all practical purposes, there is parity between the superpowers. Because of the technological capabilities of the superpowers, any attempt by one to deploy a weapon system which would alter the strategic balance would be inevitably countered by the other before the deployment of such a weapon in significant numbers. Thus, the current state of parity is desirable because meaningful arms control agreements are possible since: (a) neither superpower is at a "disadvantage"; (b) any attempt to gain an advantage is doomed to failure. More than merely being wasteful, any proposed deployments beyond some finite AD level are harmful because they might hinder both parties from reaching a meaningful agreement.

"The...case for accepting 'parity'...[is that] we cannot expect with any confidence to do more than achieve a secure second-strike capacity [i.e., an assured destruction capacity], no matter how hard we try. This capacity is not usefully measured by counting warheads or megatons or, above some level, expected casualties. Whether this result comes about with twice as many American as Soviet delivery vehicles--as has been the case in the past--or with roughly equal numbers or even with an adverse ratio, does not change its basic nature... ."

"...any significant change in deployments by either major adversary requires a long period of time...[in which the] other has notice and time within which to respond...[Each superpower] has the power to respond to a change in the deployments

of the other in a way that leaves it 'satisfied' with its new position in relation to the adversary. Each, accordingly, must anticipate such a response. And so the arms race would go on. The expected result of the process can be no more than a new balance at higher force levels, large expenditures, and, most likely, even more unthinkable high levels of destruction in the event the forces were ever used."

"The facts of weapons technology...make [new deployments]...positively dangerous...[Our] position in relation to our superpower adversary, ...for the present and near future...make[s] possible new and far-reaching arms-control agreements....The more successful the development of MIRVs in terms of both number of reentry vehicles ...and the accuracy,...the more difficult it becomes to be confident about the security of a deterrent force. Wider deployment of ABMs compounds...the uncertainties of both sides as to the effectiveness of their own and their rivals' forces. [Then] arms control agreements..become much more difficult to reach..." (Carl Kaysen, "Keeping the Strategic Balance", Foreign Affairs, July 1968).

AD also contributes to tranquilizing the arms race in a number of ways. Once a sufficient AD capability is attained, a nation need not respond to an opposing deployment unless such deployment drastically reduced the AD capability, not a very likely event. Thus interactions between strategic deployments of the superpowers are reduced. "A fundamentally new concept of the postwar period was that peace might be the child of terror.* Arms controllers quickly realized that the amount

*This specific formulation can be traced to Winston Churchill.

of terror necessary could be achieved by a finite number of weapons aimed at a finite number of adversary cities, ...there need be little interaction between the strategic arms policies of the superpowers and no need for an endless build-up. This is the idea of finite deterrence." (J. Stone, "How to Use 'SALT' ", Foreign Affairs, January 1970.) If a particular deployment does call for a response there is less need to respond quickly, as no small-scale deployment is likely to affect AD capability significantly. Thus AD offers a solution to one of the main forces fueling the arms race, the perceived need by each side to respond to projected and potential deployments of the adversary, not his actual deployment. "If our aim remains that of maintaining deterrence, we can clearly afford to wait for an event, rather than begin now to respond to our projections of the future." (Carl Kaysen, op. cit.)

In summary, then, advocates of AD are in essence making the following arguments:

- 1) The strategic arms race since World War II has brought the United States less, not more, security and has consumed vast amounts of national resources.
- 2) Strategic nuclear weapons have little or no utility other than to deter a nuclear attack.
- 3) Possession of an AD capability is sufficient to deter a nuclear attack, hence money spent to improve or increase the force beyond this point is wasted.
- 4) Each superpower will nullify any attempt by the other to improve his forces to the extent that the superpower's AD capability is threatened.

Thus, additional deployment of either offensive or defensive forces will not bring military or political advantage, only a new and higher balance of terror.

- 5) Parity between the superpowers is not only inevitable but desirable for a number of reasons. In an AD context, it tranquilizes the arms race because interactions between deployments of the superpowers are reduced. And even if a response to a deployment is called for, there is no need to respond to projected or potential deployments. One can wait until the situation is much clearer regarding the actual scope of the potential deployment. Perhaps most important, parity permits meaningful arms control agreements to be reached.
- 6) Deployment of new weaponry is not only wasteful (see 4) above) but even dangerous because it may hinder arms control agreement.

Although advocates of AD are widespread both inside and outside of the current Administration, there are many serious strategists who do not accept the AD doctrine and its consequences with regard to the U.S. strategic posture. Indeed, many of the advocates of AD quoted above have themselves on other occasions voiced views which are antithetical to the arguments given above. Consider, for example, the question of whether "superiority" in nuclear weapons has any significant political value. Here is one verdict:

"There is an...obligation to meet the arguments of those who think we are too strong [i.e., have an unnecessarily large number of nuclear weapons]. When these arguments grow out of fundamentally different views on the purpose and meaning of effective strategic strength, it may be necessary to agree to disagree.

'Unilateral disarmament' is a tainted term, but it does embody something of what is desired by most of those who criticize our present strength as gravely excessive. The Presidents of the nuclear age have recognized that the law of diminishing returns applies to strategic missiles as to all other commodities;... But they have all rejected the gamble of limiting our strategic strength in terms of any absolute concept of what is enough. They have measured our strength against that of the Soviet Union and have aimed at strategic superiority; that superiority has had different meanings at different stages, but seen from the White House its value for peace has never been small" (McGeorge Bundy, "The Presidency and the Peace", Foreign Affairs, April 1964). It appears that by 1969 Mr. Bundy changed his perspective considerably. Nevertheless, many would agree with his earlier views, that American "superiority" in nuclear weapons has been a force for peace. Something close to this view can sometimes be found in or at least deduced from other proponents of AD. For example:

"Strong and survivable long-range striking forces provide each superpower with something more in relation to the other than deterrence against direct nuclear attack, though the precise verification of the extra effect is difficult. First, they provide a substantial incentive for each nation to refrain from initiating any military action against the other... These incentives become stronger the larger the forces and interests involved, thus leading to a kind of built-in brake on the growth of military incidents in situations where the military forces of the superpowers face each other directly, or could readily do so in their worldwide movements. By extension, the same incentives operate with respect to

political confrontations that might in turn lead to military action but more weakly the more remote the military steps appear to be in the chain of potential actions and reactions." (Carl Kaysen, *op. cit.*) Disparities in force levels, even if not sufficient to endanger each side's second-strike capability, could well create disparities in this second-order deterrence.

One of the key weaknesses in the AD position is that there is great reliance upon the Soviet Union having essentially the same strategic doctrine, the same philosophy of reliance upon possessing an AD capability. Thus, for example, American ABM defense of cities is opposed by AD advocates because such a system would threaten Soviet AD capability, and hence would (on this theory) cause them to increase their offensive forces. But there is little evidence that the Soviets have ever accepted an AD philosophy. None of their published works on military strategy discuss any analogous concept. (There is, of course, the usual admonition that any capitalist attack would result in a devastating socialist response but, as will be discussed below, this represents a different view of what constitutes deterrence.) Beyond mere words, Soviet actions in recent years do not indicate that AD is shaping their strategic policies. When the United States sharply increased its air defense efforts in the 1950's, with SAGE, the Soviets did not respond by significantly improving their bomber force qualitatively or quantitatively. When the United States announced its decision to deploy Sentinel, with its primary orientation on defense of cities (and hence "bad" by AD standards) the Soviets did not attack the deployment, rather they considered it an act of prudence. (One must grant that the original Sentinel deployment deliberately

included design weaknesses which would have made it ineffective against a suitable Soviet attack. The Soviets however not only did not know this, they disbelieved it.) Strangely, when Sentinel was altered to Safeguard, with its emphasis on defense of silos (which is "good" by AD standards) the Russians did begin making hostile comments. (For the most part, however, the criticism was not about the system per se, but the "military-industrial complex" pictured as being the driving force behind deployment.)

There is also some evidence that the leaders in the Soviet Union, contrary to the arguments of supporters of AD, do see disadvantages in being strategically "inferior" and value a change in the strategic balance to their benefit. "Among the key Soviet intentions in Cuba was to offset American strategic superiority by making the United States vulnerable to Soviet IRBM's. This was explicitly explained to Soviet bloc ambassadors by Mikoyan during his visit to the United States immediately after the Cuban crisis: 'The missile deployment in the Caribbean', he said, 'was aimed on the one hand to defend Castro and on the other to achieve a definite change in the power relation between the socialist and the capitalist worlds.' (from an unpublished paper by the former Hungarian ambassador to Washington, James Radvanyi, 'An Untold Chapter of the Cuban Missile Crisis')" (Z. Brzezinski, "USA/USSR: The Power Relationship", paper presented to Subcommittee on National Security and International Operations of the Senate Committee of Government Operations).

Deterrence is, in the final analysis, a psychological phenomenon. It is not enough to insure that a nuclear attack is "illogical" or "madness", for the

same action may or may not appear to be sensible depending upon the perspective of the particular decision maker. If we could be sure that the rulers in the Kremlin had this outlook: "In the real world of real political leaders--whether here or in the Soviet Union--a decision which would bring even one hydrogen bomb on one city of one's own country would be recognized in advance as a catastrophic blunder; ten bombs on ten cities would be a disaster beyond history; and a hundred bombs on a hundred cities are unthinkable " (McGeorge Bundy, "To Cap the Volcano"), then AD alone might be a sufficient strategic posture to insure deterrence. But there are other possible perspectives: "Soviet leaders might be willing to accept heavy casualties and industrial damage at home [to resolve a major European crisis favorably] if they thought the United States would cease to exist while the USSR could successfully recover and ultimately use its surviving nuclear forces to dominate the European industrial complex. Deterrence requires the maintenance of retaliatory forces which can destroy any attacker...The would-be attacker must be convinced that his own country will suffer unacceptable damage, but his conception of what is unacceptable will vary with the nature of what may be gained in terms of conquest and power. The Soviets are likely to be thoroughly deterred if they are convinced that, after a Soviet first strike and US retaliation, the military balance would be against them and ratios of surviving population and industry would not be adverse to the United States." (Harold Brown, "Security Through Limitations", Foreign Affairs, April 1969.)

Reliance on a pure AD posture, on finite deterrence, makes sense, then, at best only if there is a common acceptance of the catastrophe of nuclear war.

The United States would be vulnerable to an opposing political leader who would reject this common perception. One need not envisage the rise of some Soviet "Hitler", "recklessly" threatening war if his political demands are not met. If there were a sharp disparity in US-USSR force postures (acceptable under an AD posture), even a prudent Soviet leader could claim to believe that the disparity in forces was enough to limit Soviet losses in a war to a point where war was preferable to an unsatisfactory resolution of some extreme political crisis. Even if this were not true in fact, and even if the Soviet leader knew it was not true, the United States could find itself at a marked disadvantage in the crisis negotiations.

"[Following a military technological breakthrough] it might not be necessary for the Soviet Union to wage war in order to reach its political objectives. It could 'win' by creating and exploiting the fear of a nuclear war in a far more effective manner than it has done in the past...Recklessness may replace prudence at any time in high places. Nor have passion and error been eliminated from human affairs merely because man can afford less than ever not to be reasonable and prudent." (Hans Speier, Force and Folly: Essays on Foreign Affairs and the History of Ideas, MIT Press).

In similar fashion, if a serious political crisis arose between the United States and Communist China, the Chinese might persuasively threaten nuclear war, even if the strategic balance is heavily favorable to the United States because of a greater willingness by the Chinese to absorb large numbers of casualties (and because of the much greater dispersal of Chinese population and industry than that found in industrial states). The Chinese might also be tempted to make such a threat because of their strong belief that the United States would be very reluctant to actually use

nuclear weapons. For example, in the January 1972 issue of Atlantic Ross Terrill ("China and the World: Part II") recalls the following fragment of a conversation with Mr. Y, an anonymous Chinese leader holding an important government post. "Do nuclear weapons increase a country's bargaining power? 'Only if the other country fears them', he replied. 'If the other country does not fear them, then nuclear weapons are not a deterrent, much less a decisive force in international struggles.' Mr. Y was making an assumption that was basic to his view of the United States--that the United States almost certainly would not use nuclear weapons." [Italics in the original.]

AD, moreover, may fail the criteria put forth by Brown in another way: there is no emphasis on military effectiveness. AD is focused almost entirely on deterrence, on preventing a nuclear war from ever occurring. AD advocates generally have little concern with designing the force so that it is militarily effective if deterrence fails and a war does occur. "I fear that one nation, which devotes itself intelligently and persistently to the problem of how to win a war through a rational military strategy geared to a consistent political aim, may well develop a strategic doctrine, tactics, training and deployments that will give it a decisive advantage against the side that devotes itself solely to the deterrence of war through military means that cannot be adapted to any sensible military strategy if deterrence fails." (Paul Nitze, "Power and Policy Problems in the Defense of the West", Proceedings of the Asilomar National Strategy Seminar, April 25-30, 1960.)

"If the deterrent possessor chooses to rely primarily on but one element of a deterrent posture, such as an assured-destruction capability, then he is obviously unable to counter the many options available to his adversary. On the other hand, the options that might be exercised by an aggressor can be limited if the goal of defense planning is a war-waging strategic posture designed to deter war. In point of fact, war-waging capability provides by far the most credible deterrent." (italics in the original) (W. Kintner, Peace and the Strategy Conflict, Praeger.)

Thus, rather than focus on some absolute level of casualties, it is more desirable to consider, at least in part, the relative war outcome if a nuclear war did occur. The more unfavorable such an outcome would be for the Soviets, the more they would be deterred from any actions risking nuclear war. "The... following [is]...a reasonable requirement for a conservative American strategic posture: Following any plausibly feasible strategic attack by the Soviet Union, the United States should have the capacity to inflict as much or more total damage (of similar kind) on the Soviet Union as the Soviets had inflicted and could still inflict on the United States. ...In short, we should have a reliable capability to do at least as badly unto the Soviets as they had done or could do upon us. The Soviets could not achieve a significant military advantage by a strategic attack, and an irrational, coercive or punitive attack...would risk bringing as much or more destruction on the Soviets as they could or did bring on us. This would make the initiation of nuclear blackmail unattractive to any reasonable decision-maker at any effective level of strategic forces." (D.G. Brennan, "The Case for Missile Defense, Foreign Affairs, April 1969.)

Advocates of AD often overlook a fundamental moral issue, that most of the victims of a US retaliatory strike would be innocent Soviet civilians. "We should not deliberately create a permanent system in which millions of innocent civilians would, by intention, be exterminated in the event of failure of the system. The system is not that reliable. If we accept such a posture as an interim solution, we should be seeking ways out of it, not ways to enshrine it." (*italics in original*) (D.G. Brennan, "Some Fundamental Problems of Arms Control and National Security", Orbis, Spring, 1971.) The aim of the Defense Department should not be to assure the destruction of some minimum number of Soviet citizens, but rather to save the maximum number of American citizens.

This point relates to another issue. Regardless of what the declaratory policy is, in the event of a nuclear war, what targets should be subject to nuclear attack by the United States? With an AD philosophy it is the Soviet urban centers, but with a strategic posture concerned to some extent with waging nuclear war there are more desirable alternatives.

"By building into our forces a flexible capability, we at least eliminate the prospect that we could strike back in only one way, namely against the entire Soviet target system including their cities. Such a prospect would give the Soviet Union no incentive to withhold attack against our cities in a first strike...

"If, despite all our efforts, nuclear war should occur, our best hope lies in conducting a centrally controlled campaign against all of the enemy's vital nuclear capabilities, while retaining reserve forces, all centrally controlled. ..."

"The United States has come to the conclusion that to the extent feasible, basic military strategy in a possible nuclear war should be approached in the same way that the more conventional military operations have been regarded in the past. That is to say, principal military objectives in the event of a nuclear war stemming from major attack on the Alliance should be the destruction of the enemy's military forces, not his civilian population... . [By] reserving striking power to destroy an enemy society if driven to it...we are giving a possible opponent the strongest imaginable incentive to refrain from striking our own cities." (Robert McNamara, commencement speech, University of Michigan, Ann Arbor, Michigan, June 16, 1962). (Of course, Mr. McNamara had substantially abandoned this philosophy by the end of his service as Secretary of Defense; the question is whether he should have.)

A position of relative "superiority" with the United States possessing some counterforce capability has many desirable consequences. Reliance on AD alone would, in essence, place every nuclear power on a par with the United States. Once they had deployed some finite number of "invulnerable" missiles, say two nuclear submarines worth, they would, by AD standards, have reached "parity" with the United States. With a significant war-waging capability vis-a-vis the Soviet Union, the gap between the United States and some other nuclear power, e.g., China, would be sharp and clear, especially if that posture provided significant damage limitation capability through active and passive defense. And while it is doubtful that any nation contemplating joining the nuclear club will base its decision on any given United States posture, a "naked" AD posture by the United States is not likely to

discourage a decision to develop nuclear weapons, and would certainly motivate "improvements" in such forces once they were started.

As has been noted above, a posture of relative superiority with counterforce and damage-limiting capabilities would provide more deterrence of the Soviet Union than would mere parity. Moreover, there would be more reassurance that no sudden Soviet "breakthrough" could turn the strategic balance suddenly against the United States. In the event that deterrence does fail, such a posture would help reduce the damage the Soviet Union could inflict on the United States and help prevent the Soviet Union from dominating whatever portion of the world did survive the war. Reliance on AD alone weakens the credibility of our guarantees to other nations, e.g., those of Western Europe, that we will come to their defense, even to use our nuclear weapons, if they are faced with external aggression. The more likely it appears that U.S. military support would mean America exposing itself to nuclear blows, the less likely it will appear that the US would take such risks to honor its military commitments. "Eventually the U.S. deterrent will decline too much. One or two years ago it was very difficult to convince Americans that Paris was not just like Boston. When President Kennedy went to Berlin and said 'Ich bin ein Berliner', he meant it. It would be difficult for President Johnson to make that comment; he certainly could not say, 'Je suis en Parisien'. People would laugh at him. In two or three years given the defense establishment we are procuring, it is going to be very hard to say 'I am a Londoner' ". (H. Kahn, "Arms Control and the Current Arms Environment", in The Prospects for Arms Control, J. Dougherty, ed., Mcfadden-Bartell.)

As we have seen above, proponents of an AD posture oppose any attempt at meaningful superiority and counterforce capability on the grounds that such an action will only provoke a Russian counteraction, which will nullify any possible advantage the United States might attain. Such a possibility of action-reaction cannot, of course, be ruled out. But neither must it inevitably happen. Indeed it may be false in two directions--the Soviets may not attempt to counter our action with an equal and opposite reaction or they may not be able to. Because they need not possess an AD requirement for their forces, the Soviets may not counter defensive U.S. deployments with offensive improvements. (Recall that they did not when the U.S. air defense system was upgraded.) Indeed, if they did attempt to counter U.S. deployment of ABM they might, in accordance with traditional Russian doctrine, do so by deploying (or increasing) an ABM system of their own. Though technically one might consider this an arms race just as well, the end of the race would find the contestants tied in the sense that each could inflict a greatly reduced number of casualties. That would be much preferable, to the great majority of people, than a situation where each could inflict increased casualties on the other. Nor is it clear that an equal but opposite reaction could be found for every American action. Let us remember that for many years the Soviets lived in a state of clear-cut American superiority and did not appear to be working hard to change the situation. Indeed, as late as 1965 then Secretary of Defense McNamara asserted that Soviet leaders "have decided that they have lost the quantitative race, and that they are not seeking to engage us in that contest". (interview in U.S. News & World Report, April 12, 1965.) While it is not clear that U.S. superiority in electronics and computers could result in a major military

advantage through an improve war-waging capability, it is not at all certain that it would not, if a serious enough national effort were made.

Such an effort could seriously reduce damage suffered by the United States in any nuclear war with the Soviet Union. In his 1968 posture statement, McNamara, no strong friend of missile defense, indicated that there might be 120 million American fatalities in certain possible wars of the mid-1970's if the United States did not have any significant ABM system deployed, but that fatalities could be reduced to between 10 to 40 million if defensive systems, both active and passive, costing from \$10 to \$20 billion (in, of course, 1967 dollars) were deployed. Even 10 million fatalities would loom as a major world catastrophe, but the difference between 10 million and 120 million would be enormous.

Advocates of AD, in opposing large-scale deployment of ABM, have argued that the Soviets would increase their offensive forces to more than overcome the opposing ABM system. But, as was argued above, the Soviets are as likely, if not indeed more likely, to respond by deploying an ABM system of their own. (According to press reports, the Soviet Union has proposed, at SALT, a ban on all ABM except, perhaps, around Moscow and Washington. It is not clear, at this point, whether they have abandoned their traditional emphasis on defense, have decided they would be unable to deploy an effective ABM system, or are attempting to prevent U.S. deployment while intending to make a clandestine (or later overt) deployment of their own. In any event, the Soviet offer in no way contradicts the argument made above, that if the United States would deploy ABM, the Soviet response need not be a bigger and better offensive deployment.)

Though proponents of AD believe their position could "end" the arms race by reducing the incentive to either superpower to deploy new weapon systems or to react to a deployment by its competitor of a weapon system, the situation is not nearly as clear-cut as proponents would have us believe. If both superpowers were to adopt the philosophy so completely as to eliminate all new programs and old programs which might threaten either power's AD capability, the arms race indeed might end. But this situation is unlikely. Communist ideology, if not proclaiming the inevitability of a clash between socialist and capitalist camps, still stresses the hostility of the capitalists, and the need for "eternal vigilance". Such a situation is bound to result in developments which will pose a threat to AD. "While the danger of an attack by the imperialists exists our first task is to maintain constant high combat readiness. Consequently missile weaponry will continue to improve steadily in the future." (Deputy Minister of Defense, Chief of Strategic Missile Forces, Marshal N.I. Krylov, Sovetskaia Litva (Soviet Lithuania, Nov. 19, 1969.) Even neglecting possible new Soviet deployments of nuclear weapons, there is at least one avenue open to the Soviet Union which can enable it to reduce its casualties, and against which there appears to be no reasonable countermeasure--civil defense. In contrast to the United States, where passive measures of defense (e.g., blast shelters, evacuation preparations) are passe, the Soviet Union has given civil defense measures high priority. The 23rd Congress of the CPSU, for example, in 1966, in its Resolution and in Brezhnev's speech, called for the "perfecting of civil defense". Recent Developments in Soviet Civil Defense 1969-1970 by Leon Goure (Center for Advanced International

Studies, University of Miami) describes the Soviet commitment in this area in some detail. Goure's concluding remarks illustrate one of the weaknesses of relying merely on an AD posture. "Soviet capabilities to accomplish a large-scale evacuation of its major cities is undoubtedly improving. The fact that the Soviet system allows for continuation of essential production even under such circumstances, and that the quartering and supplying of the evacuees is preplanned would allow the Soviet Union to remain in such a posture for some time without suffering unacceptable economic and social dislocation. This could provide Moscow with a major advantage in a negotiating situation with the West. One cannot overlook also the possibility that once the evacuation has been successfully accomplished the Soviet leaders may be greatly tempted to exploit this favorable and possibly unique situation to launch a first strike."

Advocates of AD might well respond that civil defense measures such as evacuation might save lives but that the damage to the economy of the Soviet Union would be sufficient deterrent. Though some might argue as to the time which might be required for the Soviet Union to recover economically from a nuclear attack, even assuming the Soviet economy would be devastated, the Soviets will still possess a distinct bargaining advantage if they can threaten to destroy the American populace and the American economy while the United States can only threaten to destroy the Soviet economy.

Beyond strengthening the Soviet bargaining position, Soviet civil defense measures may well adversely affect the United States' AD capability. Soviet officials have claimed that effective civil defense measures could limit their

fatalities to 6-8% of their population. "The simultaneous dispersal of workers and evacuation of the plants and institutions will greatly decrease the number of people in the cities; this in turn will sharply reduce population losses in case of a nuclear attack by the enemy. It has been stated in the foreign press that a nuclear attack of an unprotected large city may result in the loss of life of as much as 90% of the population. An early dispersal and evacuation could reduce the losses considerably, to a level between 5% and 8%." (Civil Defense, latest (1969) Russian manual, translated by Oak Ridge National Laboratory.) One might discount this estimate as not entirely impartial, and perhaps made for public consumption, but some American estimates agree with this calculation. "Professor [Eugene] Wigner estimated to me that the number of Russians this country now 'holds as nuclear hostages' is not above five million. That is one quarter the number of Russians Stalin directly or indirectly sent to their deaths...in the... 'great terror' of the years 1929-39." (Joseph Alsop, Washington Post, August 11, 1971). Advocates of AD have, for all practical purposes, refused to consider or accept the possibility that Soviet fatalities could be lowered to such a level. But if and when it is recognized, then it will be the AD philosophy which will provide pressure for the United States to increase its nuclear deployment. "[F]ormer Secretary of Defense Robert McNamara was informed of the Wigner estimate. 'If true, it's not enough', was his reply." (Joseph Alsop, op. cit.)

In presenting AD as a panacea for the arms race, advocates are avoiding many hard questions. It is easy for Kaysen to recommend that we "wait for an

event, rather than begin now to respond to our projections of the future". But how long should one wait? Should one wait quietly if, say, the Soviet Union deployed 30 SS-9s a month for 10 years until we could see what precisely is the final deployment? Such advice by Kaysen is at least somewhat inconsistent with his argument that any significant change in deployment would require a long period of time in which the other superpower "has notice and time within which to respond". Will there be enough notice and time, especially considering how long it takes to develop and deploy a new operational weapon system, to respond to a new deployment if we "wait for the event"? Similarly, consider the following argument: "since the Soviet defense will be ineffective against our steadily improving offensive panoply, a reasonable response would be cynical satisfaction at their waste of resources, and relief that Moscow continues to prefer defensive expenditures to offensive ones. The only real concern, escalated arms competition, should be allayed by the recognition that there is no compelling reason for us to join it." (J. Stone, "The Anti-Missile Folly", The New Leader, Jan. 2, 1967.) What Stone overlooks is that the only way to have a "steadily improving offensive panoply" is by engaging in arms competition. It might be well to point out that Stone's belief that the defense will always be "ineffective" against a "steadily improving" offense is just that, a belief. It would appear that future major improvements in the defense are at least as likely as major improvements in the offense. In the 1980's lasers in orbit may offer a quantum jump in defensive capability.

In denouncing the "arms race" and opposing various U.S. strategic programs as destabilizing and contributing to an arms race, critics seem to be neglecting

the possibility that the Soviet Union will be "racing" no matter what the United States does. "The achievement of quantitative and qualitative superiority over the enemy usually demands long industrial efforts. At the same time, the creation of a weapon that is new in principle, secretly nurtured in scientific research bureaus and constructor's collectives, can in a short time sharply change the relationship of forces."

"The surprise appearance of one or another new type of weapon is coming forward as an essential factor, especially in contemporary circumstances. Surprise in this area not only demoralizes the enemy, it also deprives him of the possibility of using effective means of protection from the new weapon for a long time."

(Emphasis in original) (Lieutenant Colonel V. Bondarenko, "Military-Technical Superiority: The Most Important Factor of the Reliable Defense of the Country", Kommunist vooruzhenmykh sil (Communist of the Armed Forces), September 1966.

In deprecating the value of nuclear weapons, critics forget that until recent times the United States has been clearly superior to the Soviet Union in nuclear weaponry. That the United States did not (or could not) take greater political advantage of that disparity in military strength is no indication as to how the Soviet Union would perform in the event they believed the military balance was clearly in their favor. Professor Cyril Black of Princeton University, for example, in testifying before the Senate Subcommittee on Strategic Arms Limitation Talks on March 18, 1970 stated that "my impression is that if our positions [U.S.-U.S.S.R.] would have been reversed in the 1945-55 period...they would have used their superior power a great deal more than we did to extract concessions through threats."

In speculating on possible future Soviet actions, Professor Brzezinski of Columbia University notes that while Soviet leaders "are not risk-takers... they are not above using power when such power is available. Thus, if it is correct to assume that from the Soviet point of view the Cuban confrontation brought to the surface the political intolerability of strategic and conventional inferiority, then it follows that the elimination of such asymmetry may open up opportunities and options previously foreclosed to the Soviet leaders, whatever the subjective estimates to the contrary of the American policy-makers."

(Z. Brzezinski, "USA/USSR: The Power Relationship", op. cit.) Khrushchev certainly got enormous political mileage out of a nonexistent but generally believed Soviet advantage in deployment of missiles circa 1960. And there surely were cases where the nondevelopment of a weapon system would have seriously affected the United States position in the world. "There have been a very few weapons system developments which have been critical in the sense that without them the security of the United States would have been perhaps fatally impaired. These include in the nuclear weapons field the fission bomb and the thermonuclear weapon. Had we been forced to face an opponent which had either of these while we had not, our national survival might well have been threatened. In the same category of importance were the development of the first radars, the ICBM's and the entire POLARIS system. I believe I would put the nuclear submarine, even in the absence of the POLARIS missile, in the same category. The critical category also includes an anti-ballistic missile capability." (Dr. Harold Brown, speech at the Armed Forces Communication and Electronics Convention, June 12, 1962.)

With the SALT negotiations not yet concluded, the United States now stands at a crucial strategic crossroad. The nature of any acceptable arms control agreement is certain to be dependent to a great extent on the strategic doctrine adopted by the United States. If it is the AD doctrine then a desirable arms control agreement is one which reduced both the motivation for and the technical feasibility of one superpower to threaten the AD capability of the other. Thus, ABM around cities, which could reduce damage done by an attacker, especially in a second strike situation, would be desirable. High accuracy, which can markedly increase the counterforce capability of even relatively low-yield weapons, is undesirable. MIRV also threaten the AD capability because it becomes technically feasible for one missile launcher to destroy more than one enemy missile launcher. (It is true that MIRV does increase the AD capability of any missiles surviving a nuclear attack. Many adherents of AD oppose MIRV because of its destabilizing tendencies, i.e., the advantage that may accrue to the side striking first with MIRVed missiles. Especially combined with ABM, a large-scale deployment of even moderately accurate MIRVed missiles can pose a threat to the opponent's AD capability.) Because of the possibility there may be MIRVed warheads, large-payload missiles are also considered undesirable. With a large total payload, the counterforce capability of the individual MIRVed warheads can be significant even when accuracy is not very high. There is a division among adherents of AD regarding "vulnerable" weapon systems such as bombers. Some (e.g. Stone) believe that emphasis should be placed on deploying "invulnerable" systems such as SLBMs, and on efforts to make sure they remain invulnerable. Vulnerable systems, in this view, are

unnecessary, because the invulnerable missiles provide sufficient AD capability. Moreover, because they are vulnerable, they offer an incentive for the opponent to strike first and destroy the vulnerable weapons before they can be used. Some adherents of AD (e.g. MacNamara) support the nuclear "triad" on the grounds that the redundancy preserve the AD capability. If the United States were to place all its nuclear "eggs" into one invulnerable basket, according to this argument, then the Soviet Union could concentrate its resources on nullifying that particular system. By having three systems, the United States presents the Soviet Union with much greater problems in organizing a successful counterforce first strike.

Another possible area of arms-control agreement would be some understanding regarding limitations on ASW, since SLBMs come the closest, at the present time, to being invulnerable. Current U.S. efforts in ASW are focused more on protecting the U.S. fleet and keeping sea lanes open than on protecting the United States from nuclear attack by SLBMs. Some ASW techniques however may apply to the strategic nuclear threat. For example, some scientists have objected to R&D work currently being performed on producing a "super-sonar".

If the United States does not rely entirely on AD then the situation can change considerably. High accuracy, for example, need not be undesirable. While limits on offensive and defensive missiles will undoubtedly be the heart of any SALT agreement the exact mix may be different. Fewer restrictions may be placed on ABM and more on the numbers and types of offensive weapons deployed. In particular one can visualize agreements where ABM could be expanded from the very low current levels, and offensive weapons could be reduced from or frozen at their current levels.